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The author of the article, who is also the editor of the South African Shipping News and Fishing Industry Review, kindly gave permission to reprint his article.

SOUTHERN AFRICA'S FISHING INDUSTRY
1975 - 1976

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South Africa Shipping News and Fishing Industry Review
Capetown, Republic of South Africa

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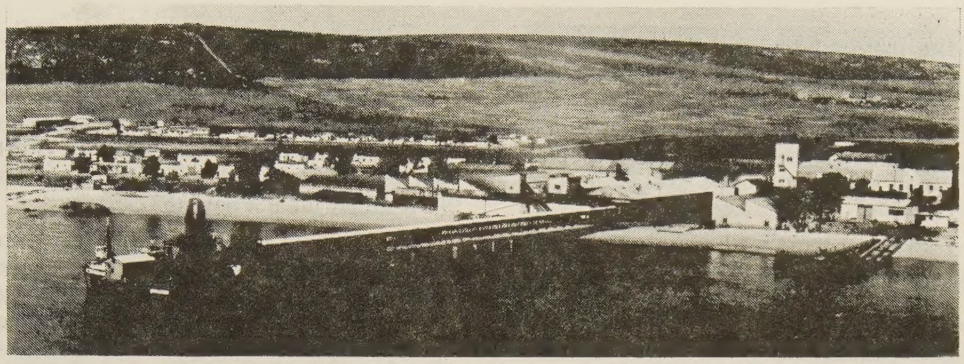
ABSTRACT

The fishing industry of the Republic of South Africa and Namibia in 1975 was characterized by rising costs and declining catches of several species. Hake catches declined, partly because of a severe winter and the 110-mm mesh size that was imposed on South African and foreign fishermen by the International Commission for the Southeast Atlantic Fisheries (ICSEAF). It set the maximum sustainable yield of the hake resource at 950,000 t, of which no more than 800,000 t were to be taken along the West Coast. Fifteen nations were active in the southeastern Atlantic in 1975, including USSR, Spain, Japan, and Poland. In Walvis Bay, the production of canned pilchards declined in 1976 because of abnormal weather and Government restrictions on landings. Pilchard landings to the south, in waters off the Republic, however, more than doubled in 1976. Anchovy landings declined while snoek catches were the best ever recorded. Catches of West Coast rock lobster were good in the Republic, but poor in Namibia. Foreign fishing on the South Coast lobster grounds prompted the Government to enact new regulations to protect the resource. South African shrimping off Mozambique was discontinued, and whaling was stopped in 1975 because severe quota reductions made whaling unprofitable.



The installation of dry offloading plants at all South African pelagic factories was the major development in the past two years. The most impressive plant is seen here at St. Helena Bay Fishing Industries.

Southern Africa's Fishing Industry

A special review of the last two years and current developments, by Michael Stuttaford, Editor, "*S.A. Shipping News and Fishing Industry Review.*"

DURING the past two years, anticipated expansion of the South West African pelagic industry did not materialise, and attention was at last focussed on the needs of the trawl industry.

Early in 1976 the Minister of Economic Affairs appointed a committee under the chairmanship of the general manager of the Fisheries Development Corp., Mr. Charl du Plessis, to examine the state of the trawl industry and to recommend appropriate corrective measures should it emerge that such action would be in the national interest.

The committee's report was sent to the minister in July, and when this review was being prepared in September, it was still under consideration by the government; its findings and recommendations remained confidential.

Ironically, many of the subjects which were considered by the committee had already been investigated by another group headed by Mr. du Plessis: the Commission of Inquiry which presented its final report to the government as long ago as 1972. This report, like three interim documents, contained a number of urgent recommendations, upon most of which, as far as the trawl industry was concerned, no action was taken.

In the light of the circumstances in which the trawl industry found itself early in 1976, the following aspects were probably considered by the committee:

☐ The present and possible future nature of foreign flag activity in the Southeast Atlantic, including whether or not the stocks would withstand a continued onslaught by large trawlers which were being excluded from fishing grounds elsewhere in the world as other nations went out to wider limits;

☐ The implications of South Africa declaring a 200 mile fishery zone, which would take the issue beyond the realm of fisheries into the arena of international politics where South Africa maintained a low profile. (It was noteworthy that from October 1976, the independent Transkei homeland would have exclusive jurisdiction over its continental shelf, even out to 200 miles if it wished);

☐ The rôle of ICSEAF in a 200 mile régime and the effectiveness of control which the international commission could exercise over the fisheries;

☐ Trawl fish quotas and catch effort

limitation both nationally and internationally. If local trawler operators were subject to these restrictions, they would fall in line with virtually all other fisheries in South Africa, but clearly, the international aspect would have to be resolved as a prerequisite;

☐ The need and method of application of State aid — hopefully not subsidy — to strengthen the South African trawl fleet technologically. This was one of the main recommendations of the Du Plessis Commission of Inquiry in 1972;

☐ Modernisation, perhaps standardisation of the South African trawl fleet (see comment below);

☐ The possibility of exploiting unconventional species for human consumption;

☐ Training of manpower.

On the strength of the Du Plessis Commission of Inquiry, it could be assumed that the committee made strong recommendations to the government on each of these aspects. If the government took appropriate action, the trawl industry could enter a period of major development. Indeed, it was generally expected that when 200 mile limits inevitably become internationally recognised, South Africa would have to increase its trawl capability to take up at least part of the effort relinquished by foreign operators who did not acquire licences to work in the wider zone.

However, as this review went to press, it was being suggested in the industry that the state of the stocks would not permit the local catch effort to be increased even if all foreign trawlers were excluded from the fishing grounds.

In such an unlikely event, it was argued, the existing South African trawl effort would be adequate relative to the strength of the stocks. The level of effort would have to be maintained until the stocks recovered and only thereafter could fleet expansion be considered. Sophistication of fish finding, catching and processing techniques would be encouraged — with the emphasis on low-cost methods.

Management along these lines would obviously bring much needed improvement to catch rates and the profitability of trawling operations. However, it was naïve to expect that all foreign trawlers would be excluded from the traditional fishing ground within the 200 mile zone, and it was improbable that the existing South African fleet would be able to make good the effort left by any large withdrawal of foreigners — it simply did not have the capacity.

The likehood was, therefore, that when South Africa followed the trend to 200 mile fishing limits, licences aimed at reducing but not eliminating foreign effort would be issued to approved, long-established operators in the area, and that large, powerful, modern trawlers would join the South African fleet, probably with State assistance through the Fisheries Development Corp. Some would replace small, older units.

Decline in hake catches

THE spotlight focussed on the trawl factory when landings started to decline and costs escalated by up to 40 per cent. During 1975 it became apparent that there was a virtual total absence of three-year-old hake in the landings, the winter of that year was exceptionally severe and was partly responsible for the lower catch, and from July a minimum mesh size of 110 mm in the nets was enforced under ICSEAF rules. Calculations made before the introduction of the 110 mm mesh suggested that initially hake catches would decline by about 15 per cent as the smaller fish escaped. Unfortunately, the other factors obscured the actual decline arising from the mesh size, but it was thought by some trawler men that it was substantially more than 15 per cent.

A more significant figure was the deterioration of the catch per unit effort after July, 1975. It was 22 per cent below the previous year's cpue and compared with an average 9 per cent decline in cpue each year for the previous four or five years.

Actual South African landings, both of hake and of all trawl species, dropped by 16 per cent in 1975 to 77 454 tons of hake and 113 000 tons of all trawl species. The latest available international figures were for 1974. They showed that the total nominal hake catch (not landings) fell by 121 400 tons compared with the previous year (already down 198 000 tons on 1972), and

that all nations working hake except South Africa and Ghana caught less of the fish.

Certain foreign nations said when questioned that they had reduced their effort in the Southeast Atlantic, but reports from local sources indicated a continued high level of foreign activity through 1975 into 1976.

South Africa's share of total hake catches during 1974 improved to 17,6 per cent from the low point of 10,6 per cent in 1972. However, ten years before, in 1964, South Africa took 60,3 per cent of the hake caught in the Southeast Atlantic.

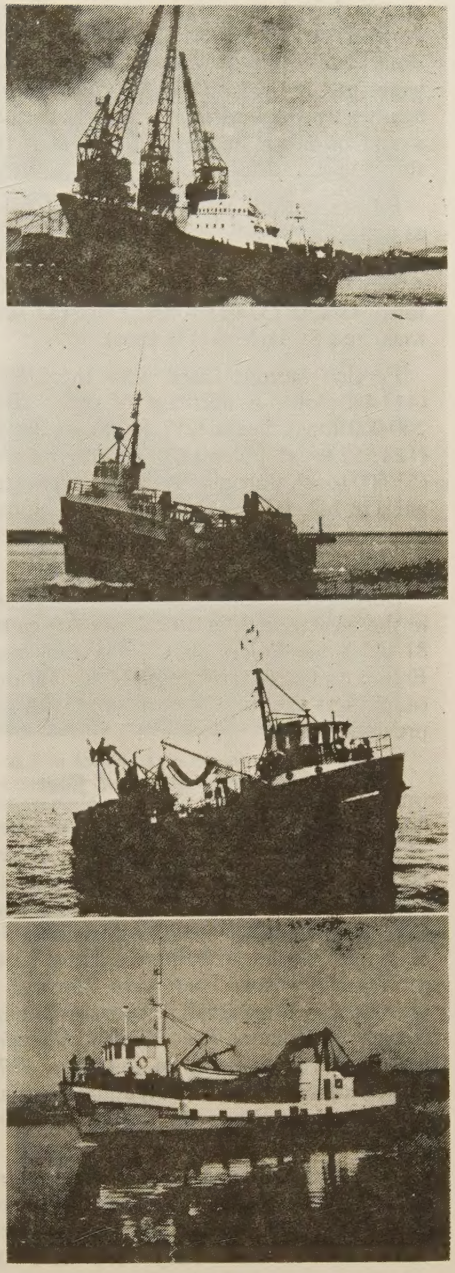
Figures showing South African trawl fish landings appear on page 41 of this book. Nominal catches or the live weight equivalent of landings provided by the FAO show a decline from the 1,1 million ton peak hake catch in 1972 to 889 600 tons in 1973 and 768 134 tons in 1974.

The most recent result compared favourably with a maximum sustainable yield agreed upon by ICSEAF in December, 1975. It was 950 000 tons of hake in the entire convention area, of which not more than 800 000 tons should be taken from the West Coast divisions of the area. Although the catch was below the recommended msy level, fears were expressed that both were too high, considering that catches of hake in the entire convention area exceeded 800 000 tons only in 1972.

Nevertheless, agreement among the (then) twelve member nations of ICSEAF on an msy was considered useful progress. The msy level would be revised if scientific data indicated the need for revision, and the commission was to meet in December, 1976 to seek a basis for implementing and administrating a total catch limitation.

In addition, trawlers of all member nations were co-operating in the enforcement of the 110 mm mesh regulation in the hake fishery. Unfortunately, South Africa was carrying the full burden of the international inspection scheme, although a Soviet inspection ship had been observed in the area.

From the start of the inspection scheme in July, 1975 to early September, 1976, South African inspectors had boarded 140 foreign and 68 South African trawlers at



Tonnage acquired by the South African fishing industry during the past two years included: The 1 531 grt *Harvest Hercules* in Vigo by Sea Harvest. The 26 m *Hesko* built by Louw & Halvorsen for Mr. Kosie de Wet at Walvis Bay, the 23,5 m *Consortium Omega* built by Nieswandt for Consortium, and the 23 m *Vegkop* built by Dorman Long Swan Hunter and fitted out by her owners, Marine Products.

sea, and had inspected numerous South African trawlers in port. During the inspections at sea, 19 nets with undersize meshes were found. Under ICSEAF rules, action against trawlers infringing the regulations would be taken by the flag nation of the ship.

Fifteen nations were listed by the FAO as active in the Southeast Atlantic in 1974. Nations domestic to the area were South Africa (1,5 million tons), Angola (468 000 tons), Ghana (37 631 tons), Zaire (12 7000 tons) and St. Helena (171 tons).

Foreign nations listed were the USSR (447 480 tons, a decrease of more than 200 000 tons), Spain (217 200 tons), Japan (122 555 tons), Poland (61 781 tons), Cuba (53 600 tons), Bulgaria (19 500 tons), Portugal (16 242 tons), France (13 544 tons), Israel (6 348 tons), Italy (2 000 tons), others 10 500 tons.

Only three nations increased their catches in the Southeast Atlantic: South Africa by 81 102 tons, Poland by 11 881 tons and France by 12 344 tons. All the other nations caught less fish in 1974 compared with the previous year.

Modernisation of trawl fleet

WHILE a number of trawlers were taken out of service, modernisation of the South African trawl fleet continued. In 1975 Sea Harvest acquired two Spanish stern trawlers fitted with filleting lines, the 1 531 grt *Harvest Hercules* and the 1 545 grt *Harvest Aries*. They were followed a year later by three small stern trawlers purchased in France. The *Harvest Hercules* was described in detail in the May, 1975 edition of this book's companion journal, *S.A. Shipping News & Fishing Industry Review*.

Irvin & Johnson, having taken delivery of the last of a series of twelve 800 grt stern trawlers in 1973, brought out two sophisticated ships in 1976. They were the 1 500 grt *Storesse* and *Sacip*, fitted with both filleting lines and with fish meal plants for trash fish and offal. The first was described as the *Kassel* in the August, 1976 edition of *S.A. Shipping News*. The company's *Stevia* had been fitted with filleting lines in 1974.

The other major trawl fleet changed hands early in 1976. Atlantic Trawling, a joint venture between J. Marr & Son of Hull and Amalgamated Fisheries, a member of the Table Top group, was purchased by Kuttelfish for R1,15 million. The sale involved a moth-balled factory and other facilities at Hout Bay as well as three trawlers, the 1 718 grt *Yellowfin*, 1 435 grt *Bluefin* and the 700 grt *Redfin* which was out of commission at the time and was later converted to freezing. (Sea Harvest had shortly before purchased the other three Atlantic Trawling ships, the *Corvina*, *Sea Horse* and *Marlin*. They were wet fish stern trawlers).

Kuttlefish had meanwhile purchased the 1 013 grt freezer *Kap Farvel* in the Faroes. She worked on the South Coast rock lobster grounds before fitting out for trawling. Other recent purchases by the company included the 289 grt *Maria Martina* and the former Irvin & Johnson side trawlers *Dahlia* and *Ixia* of 340 grt. These boats were fitted for the South Coast rock lobster fishery, but trawled during the South Coast closed season.

After the purchases had been delivered, the major trawl fleets lined up as follows:

Irvin & Johnson: 14 freezers, 24 wet fish side trawlers and a number of inshore boats along the south and east coasts;

Sea Harvest: four freezers and 21 wet fish side trawlers;

Kuttelfish: ten freezers.

Deep sea trawling association

IN view of a growing need for a co-ordinated approach to the government on such matters as the Law of the Sea Conference and ICSEAF, the three major trawling companies formed the South African Deep Sea Trawling Industry Association in 1974. It had the same secretariat as the inshore fishing associations, but did not undertake product sales on behalf of the industry like the inshore group.

Walvis Bay results

THE greatest disappointment of the past two years was the slow recovery of the Walvis Bay pilchard canning industry. After production topped 10 million cartons in 1974, it was confidently predicted that

the pack would reach 12 million cartons in 1975, 14 million in 1976, and would stabilise at 20 million cartons by 1979. Actual production fell well short of even amended estimates which chopped 2 million cartons off the 1975 and 1976 forecasts.

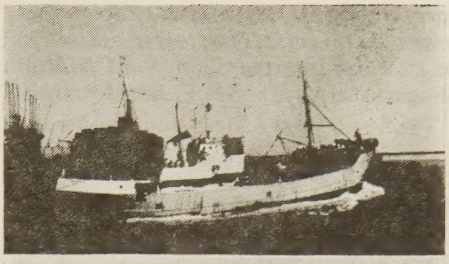
The pack was 10,8 million cartons in 1975 and 9,6 million in 1976.

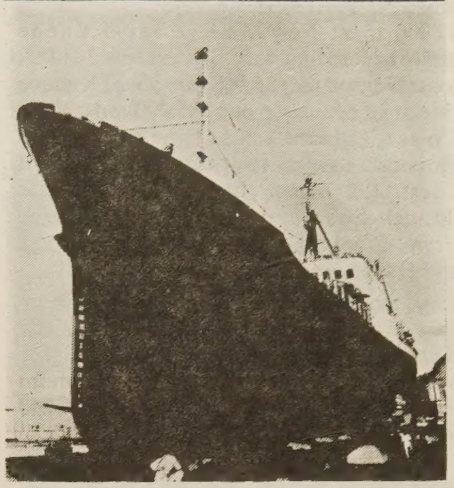
Although, late in 1975, there was a fear that a large pack would be difficult to sell on depressed world markets (which subsequently recovered), the principal cause for the lack of growth was a continued restriction on the level of pilchard landings. During 1975 there was dissatisfaction in the industry that pilchard quotas were not increased, but 1976 experience suggested that a lower level of exploitation was justified.

The 940 500 ton South West African pelagic quota was split fifty-fifty in 1973 for pilchards and other species. In 1974 the pilchard portion was increased in a sixty-forty split. The 1975 season opened on a fifty-fifty basis and with an announcement by the authorities that it would be amended to sixty-forty in favour of pilchards in June. This arrangement caused a number of difficulties in planning production and making the best use of pilchards for canning, but the 1976 season nevertheless started in the same way. By June, however, pilchards were scarce off Walvis Bay and the split remained fifty-fifty as a precautionary measure.

While the authorities remained cautious, and while some fishermen wore worried frowns, the concensus was that abnormal environmental conditions, which became apparent in 1975, intensified in 1976. Poor availability of pilchards was attributed to this factor, especially when analysis of landings showed a healthy year-class structure from one through to eight years, indicating strength and stability of the stocks.

Unfortunately, the comprehensive Cape Cross research programme which yielded a wealth of data after the collapse of the pilchard resource in 1970, was not continued beyond 1974. An accurate assessment, both of the influences of environmental anomalies and of the strength of the stocks, was therefore impossible in 1976. The industry was relieved to learn that





The 40,5 m former side trawler *Jan Maria* was converted for fishing on the South Coast rock lobster grounds for Hout Bay Fishing Industries who purchased her in Newfoundland.

The 1 013 grt *Kap Farvel*, seen here on the Cape Town Syncrolift, was purchased by Kuttelfish in the Faroes. She worked on the South Coast rock lobster grounds before refitting for white fish trawling.

later in the year or early in 1977 another comprehensive research programme was to be launched into the South West African pelagic fishery by the Sea Fisheries Branch.

The South West African quota was made up as follows: Angra Pequena (Kaap-Kunene group) 85 000 tons; Ovenstones including half Suiderkruis 111 000 tons; Tunacor (Marine Products group) 85 000 tons; Namib (Marine Products group) 85 000 tons; New West (Kaap-Kunene group) including half Suiderkruis 111 000 tons; Consortium 85 000 tons; Suid Kunene (Marine Products group) 85 000 tons; West Coast, Oceana, Northerns, Willem Barendsz, Sarusas (worked jointly by West Coast (Silverman group) and Oceana through Swaprom) 283 500 tons; Kuiseb (Irvin & Johnson group) including Protea and Hansen & Dent 10 000 tons.

All the quotas except that of Kuiseb were split for pilchards and other species. The Kuiseb quota comprised pilchards for freezing. On a fifty-fifty split the maximum permissible pilchard catch was 475 250 tons. Actual landings appear on page 43.

Angra Pequena, faced with long, expensive voyages from the fishing grounds north of Walvis Bay, obtained permission in 1976 to discharge some 6000 tons of pilchards at New West. Although there was some controversy over the arrangment, it had merit in that the fish were canned rather than reduced to meal. A similar arrangement was made between Consortium and Ovenstones. More than 10 000 tons of pilchards were saved from reduction to meal as a result of the two agreements in 1976.

Boat building trends

ANOTHER disappointment at Walvis Bay was the cancellation of the Marco purse seiner being built for Mr. Duncan Edwards in Peru as a result of a number of difficulties at the yard. The 34,8 m boat was originally contracted at about half the price of local quotations, but because it was non-standard with engine aft, it was still considerably more than the mass-produced Marco-type boats.

It seemed that efforts to sell a completely standard Marco-type in South Africa would never bear fruit, until in 1976 another Walvis Bay owner, Mr. Arie Tuit, purchased one which had been built in Peru some years before. The performance of the 34 m engine-forward *Desiré* was to be eagerly monitored during the 1977 season, for replacement of old boats was becoming critical but high new boat prices were forcing owners to delay ordering. It was hoped that prices of standard, mass-produced boats would be more realistic.

Whereas only a few years before, a 26 m purse seiner could be built and fitted out for around R200 000, and a 30 m steel boat for R300 000, prices at mid-1976 were given as R400 000 for 23,5 m and R750 000 for 28,6 m wooden boats. A Cape Town quotation in 1974 for a 30 m steel boat was R900 000. At that time, Marco were offering a non-standard 30 m boat at R470 000, and a standard, mass-produced boat at R280 000. A late 1976 quotation from Marco for a standard 36,5 m boat was R780 000, probably considerably less than local buildings, but nevertheless an enormous investement compared with prices a few years before.

While boat owner Viv Viviers completed his 28 m *Persequor* at Walvis Bay, Louw & Halvorsen delivered the 26 m *Hesko* and Nieswandt the 23,5 m *Consortium Omega*, two of the three steel boats operating from Lüderitz were jumboised by Dorman Long Swan Hunter. They were Angra Pequena's *Wildekus* and *Ruwekus*. The former was lengthened to 35,1 m and the latter to 36,33 m to increase carrying capacity to more than 400 tons.

The Swafil yard at Lüderitz continued to build boats for the Silverman and Oceana groups, but Nieswandt closed their yard at the town to reopen at the Walvis Bay Syncrolift.

Factory developments

THE major factory development at Walvis Bay during the past two years was at Tunacor. A new fish meal plant was built for commissioning in 1977, using equipment from the existing plant at the site as well as from Suid Kunene, which was to cease operation. Included in the development was a double dry offloading plant built by Rock Engineering.

Developments at other factories, mainly aimed at streamlining operations and reducing costs, were described in the September, 1976 edition of *S.A. Shipping News*. They included a white fish meal plant at Consortium, a clari-flocculator at New West, a second scale tower at West Coast, high pressure water cleaning of stickwater tubes at Oceana and a number of innovations at Ovenstones.

In the back-up industries, both Metal Box and Walvis Bay Containers increased the capacities of their plants to cater for the expected higher canning pack. By the installation of new machinery and by greater flexibility of production, Metal Box were able to produce sufficient cans to fill 14 million cartons, while Walvis Bay Containers increased capacity by the same means. Furthermore, there were once again adequate supplies of tin plate from Iscor, although higher prices put 70 per cent of the cost of the can in tin plate.

Prestocking capacity was also increased with a new Metal Box store. Total 1976 prestocks of cans by Metal Box and the fish factories reached an all time high of 300 million cans, sufficient for 6 million cartons.

Bulk fish meal shipments

A 1 140 m breakwater at the northern end of Cannery Row was completed for the Fisheries Development Corp. by Underwater Construction & Salvage. A 150 m radius turning circle was dredged inside the breakwater and a 400 m long quay wall built. When the development was announced, Sea Harvest made plans to erect a factory at a vacant site with frontage on the quay, but subsequently shelved the project.

The first bulk shipment of fish meal was loaded at Walvis Bay in 1975. The *Erika Fisser* took 5 400 tons for West Germany, and the following year the *Esther* took 5 250 tons for the same destination. Two mobile loading appliances were built by Epping Handling Systems to load the unpelletised meal at a rate of 140 tons per hour each.

One problem which arose at Walvis Bay

The 42,4 m side trawler *Donna Maria Ligia* was purchased by the Gaston Fernandes group in *France* for the South Coast rock lobster fishery.

The 1 500 grt *Kassel* was renamed *Storesse* soon after she arrived at Cape Town from Germany for Irvin & Johnson. She was refitted in 32 days by I. & J. engineers, involving the complete rebuilding of the factory deck. She is equipped with fillet lines and a 30-ton-a-day fish meal plant.

Fishing Seasons in South and South West Africa

	Season Open
Pelagic — South Africa	Jan. 1 to Aug. 31
Pelagic — South West Africa	Mar. 1 to Aug. 31
West coast rock lobster — South Africa	Nov. 1 to June 30
West coast rock lobster — South West Africa	Jan. 1 to June 30
East coast (Transkei) rock lobster	Feb. 1 to Oct. 31
South coast rock lobster	Oct. 1 to June 30
Snoek — South Africa	Dec. 1 to July 31
Snoek — South West Africa	Nov. 1 to June 30
Oysters	Mar. 1 to Nov. 30

in the production of meal was rain. In 24 hours on March 30 and 31, 1976, 65 mm of rain fell on the stacks of bagged meal, compared with the usual 18 mm in a year. The last "big rain" was in 1968. Wet meal was re-dried, usually blended with new production. Investigations by the Fishing Industry Research Institute showed that the nutritional value of re-dried meal was no different to that of meal which had not been rained upon.

Interest was aroused in the Far East by a report in *S.A. Shipping News* that more and more red jelly fish *Dactylometra* was being scooped into purse seine nets. It was regarded as a nuisance because several tons of fish had to be dumped at each set as jelly fish would otherwise be pumped aboard. Far Eastern traders said that pressed, dried and treated with salt and alum, the wafer-thin product could command high prices as a delicacy on certain markets. Unfortunately, nothing came of this proposal.

Quotas and landings

IN South Africa, the system of control by global quota with each licencee grabbing as much of the cake as his boats could load in the time allowed, was abolished at the start of the 1975 season. Instead, after protracted negotiations, the total quota was divided among the 16 licencees.

While scientific advice recommended a maximum catch of 365 000 tons, agreement was originally reached on splitting a 400 000 ton total. Adjustments were made in 1975 which increased the total to 406 000 tons, and again in 1976 when it stood at 407 380 tons.

The division of quota among the eleven factories was then as follows: Oceana group 159 700 tons worked by Lamberts Bay, Sandy Point, St. Helena Bay Fishing and Da Gama; Marine Products 36 880 tons; West Point (Silverman group) 39 530 tons; Suid Oranje (Kaap-Kunene group) 80 320 tons; Saldanha Bay Canning (Silverman group) 30 150 tons; Southern Sea 30 800 tons; Gansbaai Marine (Marine Products group) 30 000 tons.

Included in these allocations were the following quotas: Columbine (Ovenstone group) worked by Suid Oranje 25 720 tons; Oranjerivier worked by Oceana 21 780 tons; Steenbergs Cove worked by Saldanha Bay Canning 8 620 tons; Paternoster Vissery worked by West Point 15 550 tons. The other two licencees were Oceana's Hout Bay Canning and North Bay Canning. The Columbine factory remained in mothballs.

That there was merit in having the quota divided among the factories was evident during both the 1975 and 1976 seasons. In 1975 the quality of the fish was exceptionally poor with anchovy yielding as little as 0,5 per cent. Because there was no scramble to work as much of the global quota as possible, the factories were able to hold back their boats in the hope of finding better quality fish later in the season. Nevertheless, most quotas were filled by July, and an extention for mackerel was not taken up because the fish were not found.

In 1976, oil yields improved, but the bulk of the fish were found in the south near Cape Agulhas. This meant that it was expensive in fuel for the West Coast factories. They were able to hold back the boats, and towards the end of the season their patience was rewarded by the appearance of anchovy north of Doringbaai.

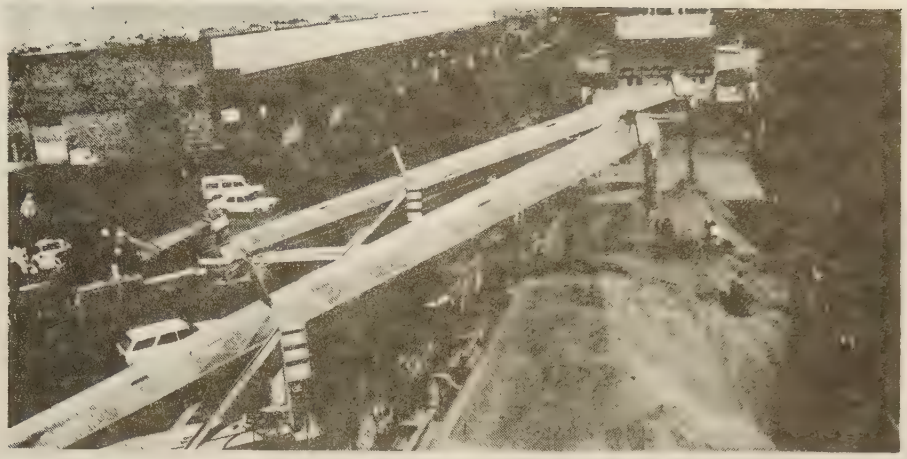
A feature of the past two years in the South African pelagic fishery was the return to prominence of the pilchard. Having fallen to an insignificant 16 800 tons in 1974, landings of the species improved to 63 000 tons in 1975 and 1976 they were the highest since 1965 at 170 000 tons.

Anchovy landings, however, declined from the 1974 peak of 350 000 tons, and the valuable late-season offshore run of mackerel had become a memorable part of history. The industry's fish spotting aircraft described the traditional offshore mackerel waters as dead, without a trace of phosphorescence to indicate the presence of fish.

As a result of the absence of mackerel near the West Coast canneries, no canning took place in South Africa in 1976.

Offloading plants

DRY offloading plants were installed at all the South African pelagic factories. Total investment was more than R2 million, half in the plants themselves, jetty altera-



The 5 400 dwt. *Erika Fisser* loaded the fish bulk shipment of fish meal at Walvis Bay in 1975. Destined for Germany, it was loaded by specially constructed mobile conveyors.

tions and conveyors, the balance of in-factory equipment required for the additional liquids brought to the reduction plants by the dry offloading systems. A full description appeared in the April, 1975 edition of *S.A. Shipping News*.

Built by R. & H. Engineering and Rock Engineering, most offloading rates based on a boat full of anchovy ranged between peaks of 180 tons per hour with two 100 hp blowers and 120 tons per hour with a single 150 hp blower.

Almost universally, the rate came down to between 75 and 80 tons per hour when the time occupied in cleaning out the last of the fish from the hold was taken into account.

After modification to the suction arms, the most impressive plant, at St. Helena Bay Fishing Industries, achieved peak rates on anchovy of between 150 and 180 tons per hour, with whole boat rates dropping to between 100 and 120 tons per hour. The Rock-built plant had two blowers powered by 150 hp motors and three suction arms, two on one side of the jetty designed for fast change-over of boats.

Cleaning out the last of the fish from the hold remained a problem. Many years' experience at Da Gama, Hout Bay, suggested that the most efficient method was to put men with shovels into the hold to move the small pockets of fish to the discharge hose. The Da Gama plant, built by John Thompson in the early 1960's and rebuilt by Globe Engineering in 1973, had two blowers powered by 120 hp motors and two powered by 150 hp motors. It was shown that the high power consumption was more than compensated for by fast turn-around of boats, enabling them to spend more time at sea when fishing conditions were ideal.

With anchovy, two blowers were normally used to give a peak rate of 240 tons per hour (the scale could not take much more than that), and with pilchards, this rate was achieved with all four blowers.

When the time occupied in cleaning out the last of the fish from the boat was taken into account, the rate fell to about 120 tons per hour, but during periods of pressure, higher average rates were achieved — for example, a total of 780 tons of mixed anchovy and pilchards offloaded from nine boats at 140 tons per hour average from the start of the first boat to completion of the ninth.

Pilchards continued to pose problems in dry offloading systems because the fish were sticky and did not flow easily, and it was still doubtful that dry offloading plants

could handle canning material without causing excessive damage. Investigations were continuing on these aspects.

New vessels for S.A. pelagic fleet

REPLACEMENT of old boats in the South African pelagic fleet was hampered by escalating costs. However, Marine Products took delivery of a 23 m hull from Dorman Long Swan Hunter. Factory engineers fitted her out at Laaiplek, and the *Vegkop* was reminiscent in several respects of the Marco-type *Aranos* built by Dorman Long Swan Hunter for the group at Walvis Bay. The *Vegkop* had a number of novel features in the Ingenieurs Bureau Vlieger design which were described in the May, 1975 edition of *S.A. Shipping News*.

Scaring the seals

ATTEMPTS to ease the problem of seals in purse seine nets were made under sponsorship of the Society for the Prevention of Cruelty to Animals. The SPCA committed R5 000 to the project, and the inshore fishing industry later chipped in with R2 500.

Research was conducted by the Central Acoustics Laboratory of the University of Cape Town and the Sea Fisheries Branch.

It was originally hoped to scare the seals away from the boats by broadcasting under water the sound of the killer whale, the natural predator of the seal. Unfortunately, tape recordings of killer whales obtained in the USA had little effect on the seals (it was thought that the whales had been mating when the recordings were made!) and the researchers were keen to make their own recordings of killer whales hunting seals off Marion Island, a difficult and expensive project. In the meantime, investigations turned to a means of producing electronic shock waves at critical moments in the fishing operation. Such a system would be designed to warn off the seals but not damage their hearing. Devices might be fitted along the cork line of the net and would be triggered by the skipper from the wheelhouse.

The rock lobster industry

THE South African rock lobster industry again enjoyed two good years, but the seasons were disastrous at Lüderitz.

The 1975 South African quota was increased by 10 per cent to 1 896 763 kg tail mass and was retained at that level for 1976, divided among 30 packers of frozen tails and six packers of live and whole frozen fish. Most of the quotas were again filled within three months of the season which opened on November 1, but quota holders in the Port Nolloth and Hondeklip Bay areas had to send their boats south to find sufficient fish.

Production in 1976 in fact exceeded the quota. It amounted to 1 901 837 kg tail mass, and the excess would be deducted from the following year's allocations.

Expectations in the last edition of this book that the Lüderitz rock lobster stocks were in a recovery phase proved unfounded. The three quota holders working one factory had a total allocation of 1 360 800 kg tail mass. The 1975 production was well below this figure, and that of 1976 only about one third of it. Heavy weather hampered fishing, and the stocks appeared to be in a very weak condition.

As was expected, initial high catch rates in the South Coast rock lobster fishery declined. Soon after the Kuttelfish trawler *St. Jean Baptiste* launched the South Coast boom in March, 1974, the catch rate stood at eight fish per trap hauled. The rate started to decline early in 1975 to level out at one to two fish per trap hauled by November of that year. Although this rate was maintained, the long-term stability of the fishery was not assured.

In particular, no juvenile *Palinurus gilchristi* could be found, and spawning areas were not identified. At one time, large hauls of small rock lobster off Port Alfred gave rise to hopes that there were spawning areas further up the coast and that the juveniles moved down-coast to the fishing grounds with the Agulhas Current. However, scientists revealed that the Port Alfred fish, although much smaller than those caught between Port Elizabeth and Knysna, were in fact mature.

Thus, the method and rate of recruitment

to the fishery remained unknown.

Production from the South Coast rock lobster fishery, from its start to September, 1976, amounted to 1 896 tons tail mass, equivalent to 9,5 million fish. Between October, 1975 and June 1976 production was 685 tons tail mass. There were 39 boats licensed to operate in the fishery for the 1976-77 season, but it was unlikely that all would be active.

A measure of protection was given to the South Coast stocks early in 1976 when the government prohibited the catching of any rock lobster on the continental shelf by boats not registered at a South African port. This effectively excluded Japanese, French and Australian boats from the South Coast grounds, which were outside the 12 mile fishing limit. It also enabled the authorities to control the effort being put into the fishery. Some of the foreign boats which were on the grounds were taken over by South African companies.

Other regulations promulgated by the government for the South Coast fishery included the imposition of a closed season from July 1 to September 30 and a limitation on the number of traps the boats could carry based on the size of the boat. This regulation caused dissatisfaction in the industry because it built inefficiency into fishing operations, and there was a growing need for research to establish accurately a maximum sustainable yield so that realistic quotas could be allocated.

Initial problems with discolouration on the membrane under the shell of the tail, similar to malanosis in shrimps, were overcome with the assistance of the Fishing Industry Research Institute and the Bureau of Standards. It quickly became apparent that careful handling and rapid processing was essential, and boats were not permitted to enter the fishery unless they were adequately fitted with a full array of stainless steel cutting, washing, dipping, grading and packing equipment and large blast freezers. Investment in the fishery was thus high.

Side trawlers, some purchased overseas, proved the most suitable for conversion, especially when owners considered it important to have an alternative occupation for the boat in the event of the collapse of the rock lobster fishery or during the closed season on the South Coast.

Boats purchased overseas included the 40,5 m *Jan Maria* and 42,7 m *Galantry II* in Newfoundland by Hout Bay Fishing Industries; the 42,4 m *Donna Maria Ligia* in France by the Gaston Fernandes group; and the 58,8 m *Suiderkus* in Venezuela by Kaap-Kunene. Some of the other entrants were drawn from local sources, including the *Dahlia* and *Ixia* from Irvin & Johnson by Kuttelfish and the 42 m *Erica* from the same source by Sentinal Fishing Corp.

The *Suiderkus* made experimental sorties on crab off the West Coast during the 1976 South Coast closed season. The project tied in with the working of crab purchased from Japanese boats and processed at Angra Pequena. The Lüderitz factory started processing crab in 1974 but after the Japanese catchers moved out of the area had to stop the trials, to restart in 1976.

Initial results with the *Suiderkus* indicated that considerable investment, know-how and great care in processing was required to achieve a high quality product. With such a product, market acceptance in the USA was satisfactory.

Record snoek catches

THE 1976 South African snoek season was the best ever, with 1 million more fish being landed than the previous best of 1927. Between December 1, 1975 and July 31, 1976 more than 4,67 million snoek were landed, 54 per cent of them east of Cape Point. The 1974-75 total was 2,22 million and that of the 1973-74 2,25 million.

East coast prawns

THE Durban-based prawn fishery which operated in the Mozambique Channel came to an end in 1975 after the new Mozambique government threatened action against Portuguese skippers and crews. As a result, the largest fleet, that of International Fishing Corp., experienced a severe financial strain while converting to alternative occupations, and was taken over as a temporary measure by the Fisheries Development Corp. After the company,

which owned 13 trawlers, had been rehabilitated, the FDC was to relinquish controlling interest. Operations continued on pink prawn in offshore waters and on lobster closer inshore.

Some of the other boats which abandoned the prawn fishery turned to the South Coast rock lobster, including those of Kuttelfish and Sea Harvest.

The end of whaling

WHALING in South Africa came to an end in 1975, primarily as a result of severely reduced quotas with which Union Whaling at Durban found it impossible to continue operations.

Following the finding that certain stocks in the Southern Hemisphere — not those off Durban — were drastically lower than 1972 estimates, the International Whaling Commission, under revised management policies, reduced 1976 male sperm whale quotas in the Southern Hemisphere by 25 per cent compared with the base year for stock assessments of 1972. The pro rata reduction meant a 15 per cent cut for South Africa over the previous year.

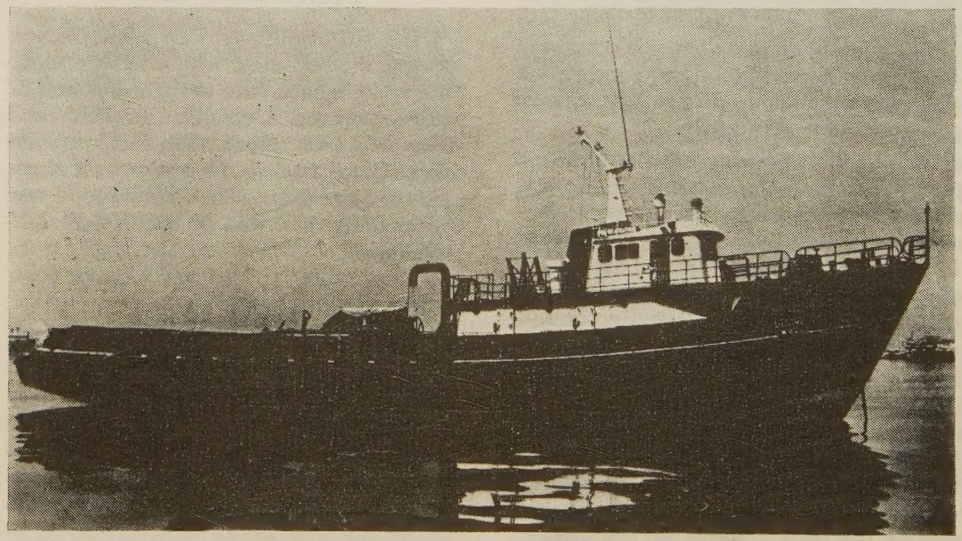
That South Africa should suffer a reduction in male sperm whale quota was considered unfortunate, for the stocks exploited within a 150 mile radius of Durban were probably the most thoroughly researched in the world and the estimate that they were 13 per cent above the maximum sustainable yield level was likely to be accurate.

Nevertheless, obituriares were written for South Africa's once valuable whaling industry, while other nations, notably the USSR and Japan, prepared to take up the quotas relinquished by South Africa.

Industry's meetings

THE two-year period under review was due to close on a note of confidence with two major events. One was the annual conference at Cape Town in November of the International Association of Fish Meal Manufacturers as guests of the South African Fish Meal Producers' Association. More than 20 nations were usually represented at these meetings as well as a number of national and international organisations. Some 300 delegates were expected to attend.

The other event was a fishing and marine exhibition at Cape Town in October. Organised by Specialised Exhibitions, 60 companies were to be represented on stands covering 1 700 sq. m. It promised to be a useful meeting place for all those involved in Southern African fisheries. ●



The 34 m *Desiré* was purchased at Walvis Bay by Mr. Arie Tuit in 1976. With engine for'ard, she may put an end to the debate over whether or not this type of purse seiner is suitable for Southern African waters. If she proves herself, the way may be open for old boats in the fleets to be replaced by mass-produced, relatively low-cost vessels of this type.

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